



CIO&LEADER
TRACK TECHNOLOGY • BUILD BUSINESS • SHAPE SELF

The New. Blueprint

The CEO's guide to leveraging technology
for winning in the post-disruption era

Co-authored by senior CIOs of 81 large Indian organizations

The background of the entire page is a detailed architectural blueprint in light grey. It features various geometric shapes, lines, and dimensions, typical of a technical drawing. The blueprint is oriented diagonally, with the top-left corner pointing towards the upper right of the frame. The main title is overlaid on this background.

The New. Blueprint

The CEO's guide to leveraging technology
for winning in the post-disruption era

Based on deliberations of senior CIOs of 81 large Indian
organizations in an intensive consultative workshop

The New Blueprint

© Copyright 2022 by 9.9 Group Pvt Ltd

PUBLISHER

Vikas Gupta

EDITOR

Shyamanuja Das

EDITORIAL ADVISORY BOARD

Jatinder Singh, R Giridhar

COPY

Sangita Thakur

PROJECT

Brijesh Singh, Dipanjan Mitra, Pratika Barua, Sachin Mhashilkar, Snehal Thosar, Vaibhav Kumar, Vaishali Banerjee

OPERATIONS

MP Singh, Rakesh Upadhyay

ART & DESIGN

Anil VK, Shokeen Saifi

The New Blueprint

The Indian CEO's Guide to leveraging tech for winning in the post-disruption era

PUBLISHED AND PRINTED BY

9.9 Group Pvt Ltd
121, Patparganj,
Mayur Vihar Phase 1
New Delhi-110 091

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

Content

Publisher's Note	04		
Editor's Note	06		
The top priorities and call to action	09		
Building a Tech Platform for Growth	11	Formulating a Winning Data Strategy	35
Charting Out an ESG Strategy	15	Improving Organizational Efficiency	39
Creating a Great Employee Experience	19	Increasing Organizational Digital Quotient	43
Discovering New Revenue Streams	23	Managing Security, Compliance & Cyber Risk	47
Enhancing Customer Experience & Loyalty	27	Transforming through Industry 4.0	51
Ensuring Business Resilience	31	Leveraging Tech Partners as Business Partners	55
		The brains behind the book	58
		Authors	60
		Notes	72

PUBLISHER'S NOTE

Beyond a digital manifesto

THE pandemic didn't start digitization. All it did was to force organizations for a real-life demo. And how!

While the pandemic did play its part, we are probably giving it too much of credit. Its role was crucial, yet tactical. Centrality of technology to business is an idea that has gaining ground in last decade or so. Hyper-connectedness, newer digital native generation, and innovations in the supply side have all contributed into this phenomenon.

Today, as technology affects businesses beyond the process and product planes by impacting the strategy directly, it is a no-brainer that the CEO needs to be glued in. That doesn't mean being on top of coding but being able to appreciate, gauge and probably discover the transformational role technology can play in their business and how.

This book - The New Blueprint – was conceptualized with the objective of helping CEOs in that process of appreciation. The name is derived from the need to have a new strategy outlook that takes into consideration the role of technology in building competitive advantages for the business.

And who better than the CIOs and CTOs, the custodians of technology in the organizations, to author it? While what the book should contain came in consultation with them – through both

survey and consultative meetings, the core content was finalized in intense discussions among CIOs divided into groups or committees, who physically sat together in our annual conference in Goa held in August 2022. This was followed by further deliberations within each group to fine tune the content. Of course, our editors helped them in putting it all together.

The book is divided into chapters based on business priorities – not technologies. If enhancing customer experience is your current top priority, you can start with that. If building a data strategy is what you are concerned about that, you can go to that chapter first and so on. The chapters are crisp, recommendations are specific and given as bullets, for easier reference.

Each chapter has specific recommended CEO interventions. And one message that comes loud and clear. That technology-led transformation is a lot about driving culture change in the organization. And that is the biggest expectation from the CEOs.

Happy reading!

Vikas Gupta

Founder & Director
9.9 Group

EDITOR'S NOTE

The collective wisdom of the tech custodians

AT 9.9 Group, we work closely with the community of CIOs and other senior technology professionals in user enterprises to understand and address their information needs. Our effort has always been to leverage the collective wisdom of the community to help the same (broader) community. To that effect, we have created multiple insightful books, based completely on community knowledge, which we have captured through intense engagements. All these books so far have been targeted at IT practitioners.

Post the pandemic-led disruption, we have been getting continuous feedback that CEOs have become far more Interested - in fact, even involved - in technology-led transformation of their businesses. Our research showed us that there is hardly any information available for Indian CEOs that can help them in this - make right strategic tech-led interventions - in a language that they are comfortable with.

The book, The New Blueprint, that you are holding in your hand, is a



Unlike our earlier books, which are organised around technologies, The New Blueprint is organised around the business priorities of the CEOs

response to that need. This has been created using our time-tested method of capturing collective wisdom through intense engagements. The CIOs, who have authored the book, don't just understand technology thoroughly, they exactly know what the CEO wants. What is more, they are well versed with the Indian ground realities. Their recommendations, hence, are not just insightful, but also practical and actionable.

Unlike our earlier books, which are organised around technologies, The New Blueprint is organised around the business priorities of the CEOs. Each chapter addresses one such business priority. The business priorities have been selected on the basis of a survey among a large set of technology leaders along with a series of advisory meetings with selected senior CXOs in large Indian enterprises.

Each of the chapters gives a brief background of the role of technology in a particular application area, suggests a set of strategic recommendations, and specifically suggests the kind of interventions needed from the CEO, while listing down a set of technologies that could help bring about transformational changes in that area. The core of the recommendations have been finalised in focus group meetings around each of these areas, in our annual conference at Goa in August 2022. While eleven of the chapters have been written by the CIOs, one chapter has been written by the executives from the technology supplier community.

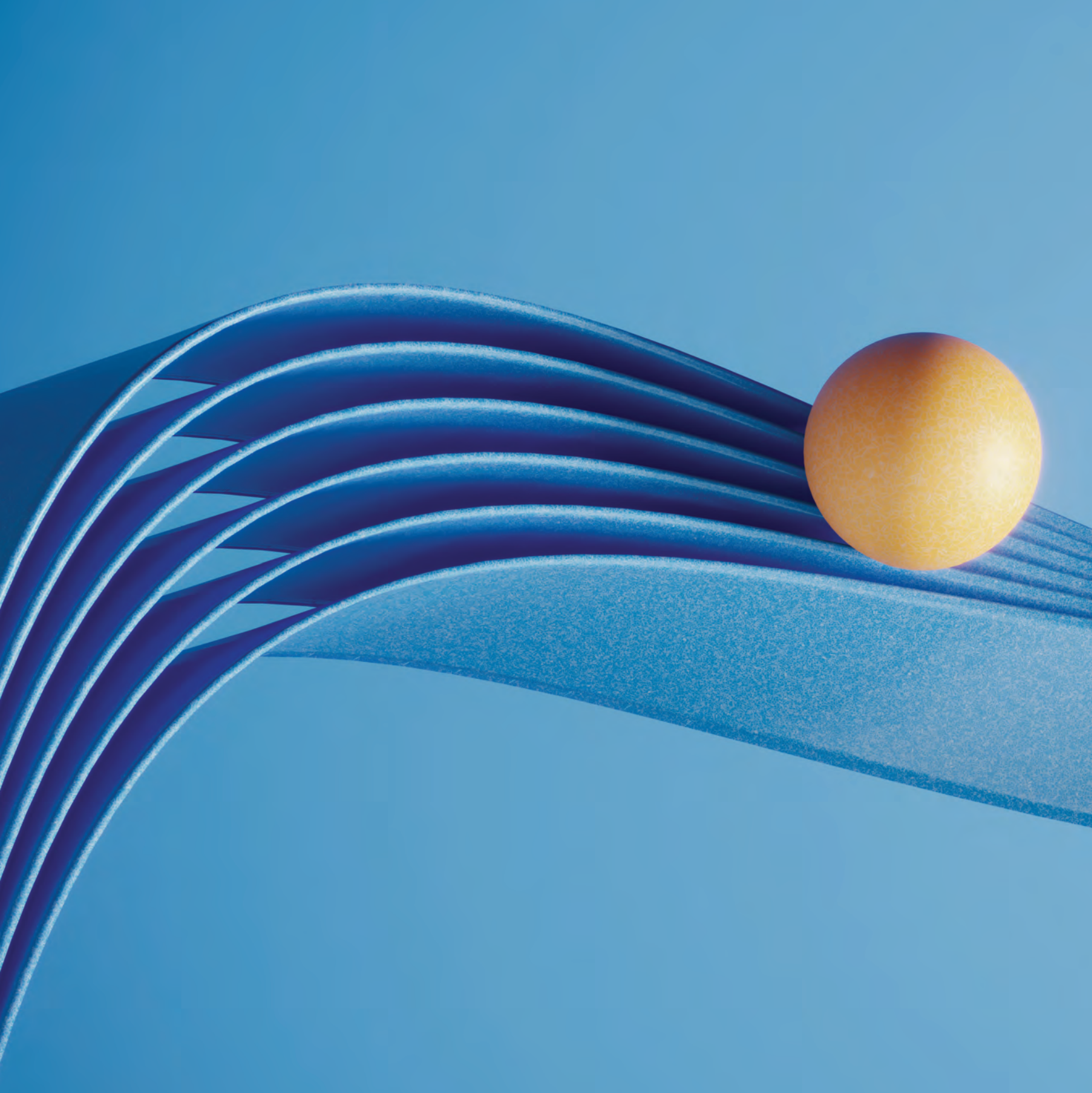
The book also carries brief profiles of all the authors who have painstakingly worked on it.

While there are specific recommendations for each of those business priority areas, there are two expectations that have come out which are reflecting in recommendations across multiple areas. One is: the CIOs expect the CEOs to drive the cultural change in the organization, for these technology-led transformations to be successful. Two, they expect CEOs to sponsor the transformation projects within the organization, and drive them directly from the top.

Needless to say, the authors, as well as we, the editors, will be happy to receive your feedback and suggestions on how we can do it even better.

Shyamanuja Das

Editorial Director - Enterprise Technology
9.9 Group



THE TOP PRIORITIES AND CALL TO ACTION



TECH PLATFORM FOR GROWTH

Building a Tech Platform for Growth

AUTHORS

- **Arvind Koul**
Head Infrastructure and
Cybersecurity, UNO Minda
- **Caurav Bagga**
SVP and Head of Engineering
and Product, Pristyn Care
- **Hemant Misra**
VP-Head of Applied Research,
Swiggy
- **L B Sharma**
GM Information Technology,
Bharat Petroleum Corporation
Limited (BPCL)
- **Nagarajan Vaidyanathan**
Lead-IT Infra,
Britannia Industries
- **Shailesh Tripathi**
Executive Director (IT),
HUDCO
- **Venugopalam Medicherla**
Group Vice President – Digital
Technology, Head of IT, MSPL

THE delivery and management of IT infrastructure is getting significantly impacted by the ongoing transition to anytime, anywhere work and the rising stakeholder expectations for performance, usability, and dependability. The development and ongoing improvement of resilient digital services and digital experiences is supported by the new digital infrastructure ecosystem, which is increasingly built on a cloud foundation. This ecosystem is focused on ensuring ever faster delivery of innovative infrastructure hardware, software, resource abstraction, and process technologies.

Technologies that could help

- IaaS, SaaS and PaaS
- Microservices and Containerization
- DevSec Ops
- Application aware Infrastructure
- Open Source
- Cloud
- AI/ML Support by the platform
- IoT

It is apparent that business outcomes, not technology requirements, will drive future infrastructure design—with workload placement strategies driven by business needs and business value.

Therefore, enterprises need IT infrastructure that has a strong emphasis on increasing business resilience, boosting application and business performance, and fostering innovation by updating architectures, enhancing automation, and utilising ecosystems.

Vision

Ensuring the availability of a sustainable tech platform that is always available/reliable, secure, scalable, easy to manage, cost effective and efficient to support the current and future needs of the organization.

Strategy

The requirement for IT infrastructure is no longer predictable, so the capacity-scaling speed will be essential. Infrastructure may be required for years, months, or even just a few hours, depending on workload and company needs. We suggest the following to reach that level of technological competency.

- Evaluate the needs of your organization based on factors such as: a) type of industry (such as finance, manufacturing) b) maturity of organization (established, startup), c) type of data



storage/decision needs (PII/non PII, real time/near real time/not real time, data volume) and so on

- Examine common requirements such as strong information security
 - Outlining advantages and disadvantages of both in-house and outsourced options
 - Framework to analyse opportunity costs when building vs. buying
 - Various cloud solution types (Hybrid, private, or public), and what can be the best option for a certain use case.
 - ROI plan for business process coverage. How to stay nimble-footed in tune with the ecosystem

CEO's Interventions

- To keep up with the digital age, adopt a growth mindset that prioritises technology. While technological advancements help businesses thrive, they also have the potential to become a bottleneck if the wrong choices are made.
- Reducing total cost of ownership (TCO) - CIOs and CTOs should oversee growth plans so they can scale the tech infrastructure to support them.



ESG STRATEGY

Charting Out an ESG Strategy

AUTHORS

- **Apurva Dalal**
CIO, Adani Green Energy
- **Atanu Pramanic**
Joint President & CIO,
Hindalco Industries
- **Debanjan Banerjee**
CIO, Pernod Ricard India
- **Sanjay Narkar**
Advisory Board Member,
Finarya Tech
- **Sathyanarayana Singh**
CIO, Nayara Energy
- **Sridhar D**
CTO, Karur Vysysa Bank

MANY large corporate organizations are announcing a slew of environmental, social, and governance (ESG) initiatives. There is a need to reliably measure and report the progress towards the achievement of these goals.

Since CIOs are responsible for enterprise technologies, they have the most complete view of the interdependencies and interactions of people, processes, and technologies across all business functions. They can leverage their knowledge to help the company achieve its ESG objectives. The ability to provide transparent, data-driven insights

Technologies that could help

- IoT
- Analytical technologies for reporting
- AI/ ML to learn and improve water/ energy consumption
- Data security & privacy tools
- Learning tools with AR/VR for driving ESG literacy
- ProcessMap
- ESG performance measurement tools like Sphera, Enablon, Intelex, Cority, etc. Most risk management software now are building this capability

and measure progress toward objectives makes IT critical to the success of any ESG strategy.

Various ways in which IT can contribute towards ESG goals include:

- Energy monitoring and energy consumption optimization across the organization, increasing the energy and material efficiency of IT infrastructure and workplace services
- Deploying technologies to measure carbon footprint and climate impact of supply chains
- Adopting green computing, and implementing circular economy practices in partnership with vendors to improve e-waste management, increase reuse and refurbishment of equipment
- Using DEI (diversity, equity, inclusion)-focused technology solutions that address talent acquisition, employee development and employee engagement
- Ensuring socially responsible application of technology solutions
- Improving data privacy & compliance reporting

Vision

Achieving the ESG goals of an organization effectively and efficiently by orchestrating (identifying and adopting) right technology solutions and practices.

Strategy

The initial challenge before organizations in ESG to be in control of the objectives, the journey and the

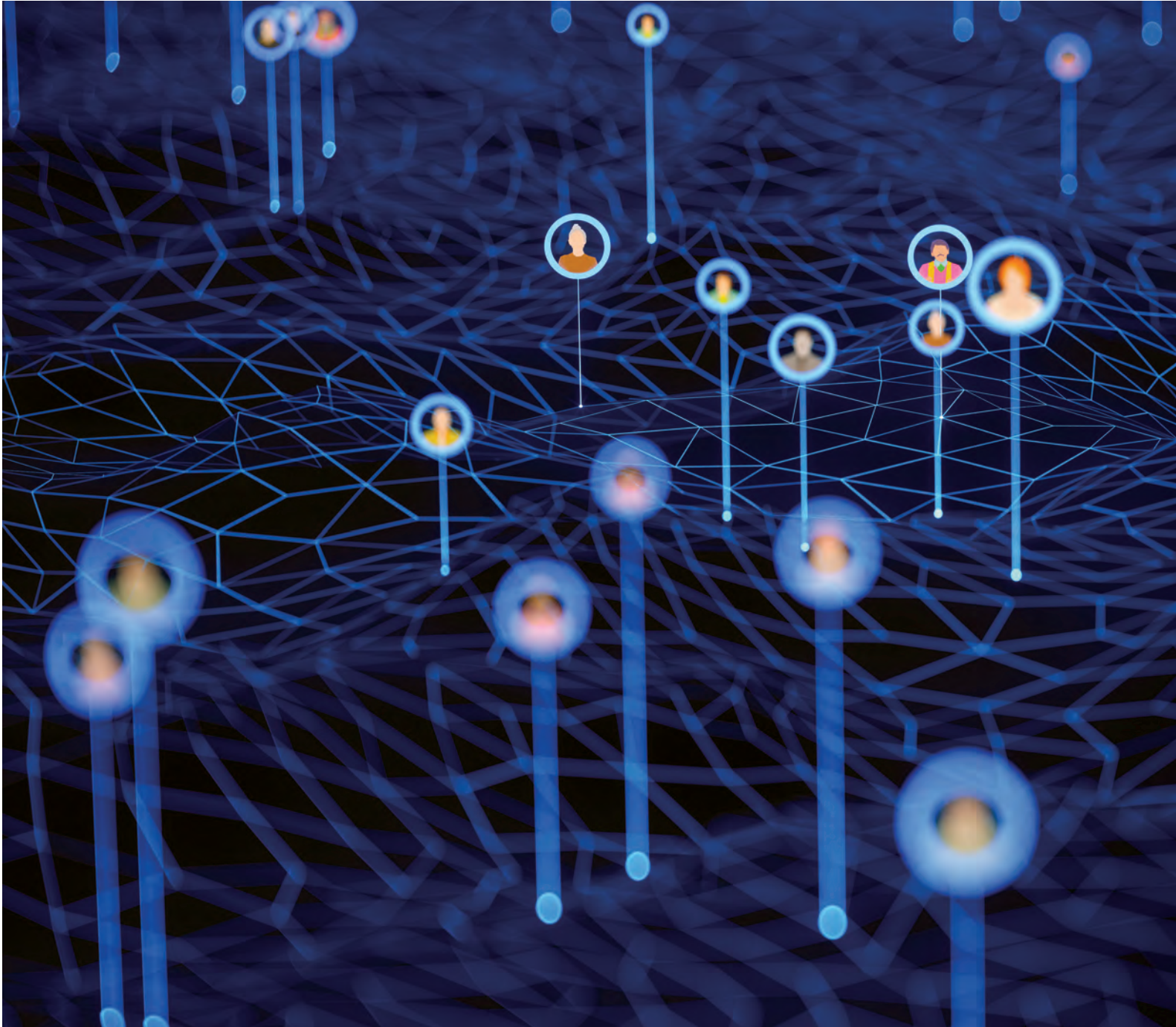


outcomes. We recommend the following:

- Identify areas across ESG goals that IT can deliver through technology in partnership with stakeholders
- Devise a mechanism for data collection through IT enabled programs for various ESG KPIs, governance and reporting
- Devise a data privacy and security framework, as it deals with a lot of sensitive data

CEO's Interventions

- Define clarity on ESG goals, metrics to all stakeholders, and continuously monitor the progress of ESG goals through IT-enabled system
- CEO should sponsor and allocate resources needed to achieve the goals



EMPLOYEE EXPERIENCE

Creating a Great Employee Experience

AUTHORS

- **Anantha Padmanabha B**
CTO, Karnataka Bank
- **Byju Joseph**
CTO, Future Generali India Life Insurance
- **Harnath Babu**
Partner & Chief Information Officer, KPMG India
- **Kapil Mehrotra**
Group CIO, National Collateral Management Services Limited (NCML)
- **Manoranjan Kumar**
CIO, Shree Cement
- **Mukesh Kumar**
VP-IT, BYJU'S
- **Naresh Kumar Pathak**
VP-IT & Head-Global Delivery Center (India), Andritz

WHILE the pandemic changed many things and accelerated digitization in businesses, one thing it fundamentally altered is the rules of the workplace. A Qualtrics survey revealed that over one-third of employees would leave their work if they were asked to come to the office full-time. This turns many of the organizational culture axioms, developed over more than a century, on their heads.

Technology is now both a facilitator and a stumbling block for employee experience. The new hybrid enterprise need tools that help deliver smooth collaboration across its hybrid workforce while also balancing experience and security, better speeds of access, and the right UX/navigation while also ensuring productivity, security, and cost goals from an employer's perspective.

Technologies that could help

- **Agile technology collaborative platforms**
- **Employee engagement platform**
- **Zero trust network architecture**
- **Mobile first**
- **Enabling Self service using AI**

Making the workplace more welcoming for millennials who are entering the workforce is a new necessity. A new need is to make the workplace more conducive for millennials who are joining the workplace. This is one area where the CEO would want technology's help.


Vision

- Be the employer of choice who delivers superior employee experience and whom employees choose to work with over competitors

Strategy

The initial challenge before organizations is to retain talent in the highly competitive market space while ensuring that proper tools and processes support their hybrid workforce's efficient and flexible operations. We recommend the following:

- Adopting a 3 pronged strategy – work, workforce, and workplace – for fostering a collaborative and empowered workplace
- Setting the tone from top leadership
- Reframing culture
- Simplifying work environment
- Up-skilling of workforce
- Leveraging emerging technologies for improved network access, robust security, and greater employee communication and efficiency



Giving employees some autonomy and flexibility can have a significant impact on how they view their work and their overall productivity.

- Creating user-friendly platforms
- Strengthen monitoring and measurement capability to increase employee productivity
- Creating experiential IT

CEO's Interventions

- Set an example of the culture you want and make sure it permeates the entire organization through effective communication.
- Ensure program sponsorship by analyzing objectives and establishing key milestones.



REVENUE STREAMS

Using Tech to Create New Revenue Streams

AUTHORS

- **Ajay Rambal**
Head - IT, LG Electronics India
- **Bhalchandra Chanekar**
Director - Software
Development, Angel Broking
- **Deepak Bhosale**
GM - IT, Asian Paints
- **Kirti Patil**
Joint President - IT & CTO,
Kotak Life Insurance Company
- **Kopal Sarin Raj**
VP - IT & India CIO,
Wabtec Corporation
- **Mahesh Koria**
VP & Head - Analytics &
Reporting (Liabilities & Assets),
BIU, Axis Bank
- **Rajeev Batra**
CIO, Bennett, Coleman &
Company

COMPANIES are dramatically re-shaping existing industries by creating new ways to monetize products and services.

In many instances, new revenue streams are facilitated by novel technologies that transform both the process and the outcomes. For instance, by leveraging the connected capabilities of IoT, it is possible to deliver billing models based on Product-as-a-Service. Other opportunities include selling existing digital assets, digitalize an existing product or service to complement traditional, non-connected offerings, or even run a platform

Technologies that could help

- AI/ML
- Data Analytics (Descriptive to predictive)
- Omni-channel experience platforms
- AR/VR/Metaverse
- Block Chain
- Hyperscale personalization
- Next Gen Cyber Security
- IOT
- Pricing Engines
- MarTech (Marketing automation, Web Analytics, Visualisation, etc)

business - enable the trading or exchange of products and services without owning or distributing the products or services.

Vision

Generating new revenues leveraging tech requires a clear vision. The simplest and most powerful vision can be to define a percentage of revenue.


For example: Digital-led customer experiences generating x% of revenues through new offerings

Strategies

A clear cut strategy can be defined in the following steps.

1. **Assess** the macro environment, the opportunities, the customer expectations and the current state
2. **Define** end state, gaps in process, technology, talent, the new CX and revenues/Rol (e.g data monetization)
3. **Execute** the milestones, align organization Structure, talent acquisition, technology acquisition, data strategy and ecosystem based marketplace
4. **Measure** governance, newer models for pricing offerings and feedback and improvise

For a business, it could start with digitizing existing offerings (least transformative) and move to create marketplaces to ultimately launch into newer markets (most transformative)



Define audacious goals, bring in the cultural transformation and drive newer revenues through disruptive CX n EX

Recommended strategies include:

- Derive insights through current data assets. Using insights to develop new areas of monetization.
- Predictive elements for customer experience through personalized segmentation
- Eco-system centric marketplace – one stop fulfillment for customer ease
- Utility based commercial modeling for increasing volume and hence revenue

CEO's Interventions

An initiative to generate new revenue streams cannot succeed without the CEO's buy-in and active interest. The CEO should:

- sponsor the initiative
- create an independent BU – preferably headed by a technologist



CUSTOMER EXPERIENCE & LOYALTY

Enhancing Customer Experience & Loyalty

AUTHORS

- **Ashish Desai**
CIO, Aditya Birla Group
- **Bhakti Tare**
Sr DGM HO IT,
Larsen & Toubro Limited
- **Nikhil Khanapurkar**
Senior Vice President -
Enterprise Factory,
HDFC Bank Ltd
- **Rohit Chatter**
Chief Software Architect,
Walmart Global Tech
- **Shobhana Lele**
CIO, Bombay Dyeing

THE definition of customer experience has now come to mean what it should always have been – a customer’s overall experience with a seller in all their touch points – learning about the brand, getting the right product, ordering, fulfillment, post-sale services, and everything in between – rather than just a few specific defined functions.

That requires

- explicit measures to make that experience delightful

Technologies that could help

- **Bot:** Proactive to solve
- **Augmented Realty:** Feel the product
- **AI and IoT:** Know your customer & Predict the behavior
- **Analytics / BI:** Measure and Improve
- **RPA:** Automate internal processes to make it more reliable, accurate and efficient
- **CRM:** Campaign management and Loyalty management
- **UI / UX and Secure Framework across:** Omni channel experience

- ensure that all the backend processes are reliable, accurate, and efficient
- have a great deal of knowledge about the customer

As businesses digitize their processes, technology has an opportunity to improve that experience in each of these areas. What has accelerated it in recent months is the rapid digitization of customer interaction points. According to McKinsey, post-pandemic, more than 80% of all customer interactions are now taking place digitally. This has pushed businesses to reinvent their processes to provide fully integrated user experience across all challenges.

The vision

Enable customer to discover, connect and decide to buy product / services by creating intuitive and delightful experience

The Challenges

In order to give the right product to the right consumer at the right time, the main challenges are around understanding the customer and forecasting behaviour. Among them are:

- Low product/service discoverability
- Poor customer stickiness, i.e., how likely your customers are to return and purchase your product again
- Low customer loyalty

**You trust what you
experience and what
you experience is
what you buy.**

Strategies

We recommend a mix of overarching change in approach and specific initiatives to significantly enhance customer experience. In particular, we suggest the following:

- Build an omnichannel customer experience
 - Train customer service staff well to keep up with changing customer expectations
 - Leverage cutting-edge technology such as AI, ML, RPA, data analytics to improve UX/navigation/ease of information and understand customer behavioral patterns
 - Actively consider social proof—testimonials, ratings, reviews, and feedback—and promptly complete the feedback loop with customers.
 - Implement customer loyalty program
- Ensure organization-wide customer-centric approach

CEO's Interventions

Customer experience must be embraced throughout the organization if it is to be used as a competitive advantage, and CEOs must play a key role in making sure that happens. The interventions required are:

- Give the technologist a seat at the table that will help drive a tech-enabled business strategy
- Focus on organization change management to make the strategy work



BUSINESS RESILIENCE

Ensuring Business Resilience

AUTHORS

- **Abhishek Gupta**
Vice President IT, Dish TV
- **Anand Hadgaonkar**
CIO Asia, Whirlpool Asia
- **Ashok Jade**
Global CIO, Kirloskar Brothers
- **Ashok Nayak**
CIO, Ipca Laboratories
- **Chandan Sinha**
CIO, Jindal Saw
- **Dhaval Pandya**
Corporate CIO,
Piramal Enterprises
- **Mohan Malage**
Head - IT Infrastructure,
Yes Bank
- **Rajiv Sharaf**
Head - IT, Torrent Power
- **Sujit Sinha**
Head - IT Infrastructure,
FIAT India Automobiles

RESILIENCE is the ability to withstand adversity and bounce back. It is the foundation on which risk management in a business stands.

Traditionally, IT was concerned only with a narrow view of resilience – resilience of IT infrastructure. Business continuity measures and redundancy were built into data centers, networks and other infrastructure – against disasters such as natural disasters like flood and earthquake.

All that came to naught when COVID struck. The data centers and networks were perfectly working. Yet, there was disruption because people could not move. The IT leaders learned the hard way the

Technologies that could help

- Leverage Cloud
- End user mobility technologies
- Industry 4.0
- AI/ML
- Intelligent Process Automation
- Blockchain
- CyberSecurity
- Advanced Analytics

limitation of such narrow views. It is to their credit that they quickly responded.

What the pandemic taught is that the role of technology is not complete by making IT systems resilient. The scope of business resilience is far wider and technology has a role to play in creating solutions for the entire spectrum.

Of course, as businesses become more digitized, the importance of more resilient IT systems increases too. Finally, with cyber security threats, it is upon technology to make the business resilient against those attacks too.

CEOs can no longer afford to take a wait-and-watch approach as they focus on the resurrection and next phase of growth, necessitating adaptive response plans to deal with both short-term and long-term disruptions. The financial and reputational costs are enormous, and companies require a strategic action plan to better equip themselves and be more robust to significant disruptive events.

Vision

To ensure continuity of all services for the end customers by building appropriate systems across people, process & technology front.

Strategy

Effective business resilience can be achieved by planning for it across all the three planes – people,



process and technology. We recommend:

- Hire the right people
- Build strong and agile leadership
- Assess all vulnerabilities and plan business continuity plans for all
- Create flexibility in operations to quickly respond to unforeseen situations
- Create a supportive ecosystem
- Technology should be used to analyze, predict, and change operations on demand

CEO's Interventions

- Sponsor BCP projects from the top
- Invest on digital technologies at all levels to monitor, manage and take quick action



DATA STRATEGY

Formulating a Winning Data Strategy

AUTHORS

- **Pankaj Kankar**
Chief Technology &
Product Officer,
AJIO, Fashion & Lifestyle
(Reliance Retail)
- **Sunil Mehta**
CIO & Partner, BDO in India
- **Subodh Dubey**
Global CIO, Suzlon Group
- **Vinod Bhat**
CIO, Tata SIA Airlines (Vistara)
- **Durgaprasad Swaminathan**
EVP & CIO, Cholamandalam
Investment & Finance
Company

A HOLISTIC data strategy is an imperative for any business today to compete. In the next few years, the data strategy will be integrated into the organizational strategy formulation. But before that happens, organizations need to travel some distance, with a focused data strategy.

Today, tools and processes are available for efficient collection, processing, storage, and retrieval of data from a wide variety of sources. But the big issue is: only a small fraction of the collected data is being actively used for making decisions.

According to Harvard Business Review, there are two key roles for data: Data offense which

Technologies that could help

- **Data Ingestion using ETL**
- **Data Integration**
- **Data Co-relation tools**
- **Big Data, Data Lake and Data Mesh**
- **Data Analytics and Insights**
- **Visualization and Reporting**
- **Data Access and Monitoring**
- **Data Privacy and Encryption**

focuses on supporting business objectives like increasing revenue, profitability, and customer satisfaction; and Data defense that is about minimizing downside risk. Defensive activities include ensuring compliance with regulations, using analytics to detect and limit fraud, and building systems to prevent data leakage and theft. Defensive efforts also ensure the integrity of data flowing through a company's internal systems by identifying, standardizing, and governing authoritative data sources.

The Challenges

The principal hurdles to effectively leveraging data include quality, quantity, and relevance of data and data trapped in silos.

The specific challenges are

- Lack of digitalization across value chain
- Siloed enterprise data
- Difficulty in aggregating data
- Using data for effective business decisions
- Lack of data-first culture (and hence) data literacy in the enterprise

Strategies

We propose the following as essential components of a good organizational data strategy:



Adopt Data-First strategy & culture for effective business Decisioning

- Data-First Digital-First Approach across business and technology
- Data Ownership and Governance
- Purpose driven use cases connected with KPIs
- Data Analytics and Insights to move business decisions from Reactive to Proactive to Predictive to Prescriptive
- Build Business Resilience, Adaptability and Flexibility based on Data Strategy
- Data Compliance, Regulation and Privacy at the heart of Data Strategy

CEO's Interventions

The CEO should drive an organization's transformation into a data-centric organization. The specific interventions needed are:

- Sponsor Data Strategy and drive Data-First culture in the enterprise
- Ensure Data Privacy and Regulatory Compliance across the enterprise



ORGANIZATIONAL EFFICIENCY

Improving Organizational Efficiency

AUTHORS

- **Amit Pradhan**
CIO, Dixon Technologies Ltd.
- **Jitendra Mishra**
VP-CIO, Akums Drugs & Pharma. Ltd.
- **Meheriar Patel**
Group CIO, Jeena & Company
- **Neeraj Vetkar**
GM-IT, Avenue e-Commerce
- **Paresh Goswami**
Head-IT, Suzuki Motors Gujrat
- **Puneesh Lamba**
CTO, Sahi Exports Pvt. Ltd.
- **Rajeev Mittal**
CIO, Endurance Technologies Ltd.
- **Sanjay Prasad**
CIO, RP-SG CESC Power Group
- **Sivasubramanian M**
Global CIO, VA Tech Webag

ENHANCING Operational Efficiency has been the most proven expectation from enterprise IT so far. The problem starts when CEOs start wondering why organizational efficiency has not improved significantly despite dramatic improvements in operational efficiency in some processes. The answers could vary from organization to organization.

Technologies that could help

- **Robotic Process Automation (RPA) for the revalidated organization processes**
- **AI/ML interventions to exploit historical labelled data**
- **AR/VR/Digital twins for manufacturing/production processes for predictive analytics and improved customer experience**
- **Block chain to dis-intermediate processes to minimize human error and discretion**
- **IOT/IIOT enablement on edge assets and devices**
- **Business analytics/intelligence (BA/BI) for executive and business managers dashboard**

A possible reason is that the breadth of that impact is limited to a few processes in few functional areas. As a project, it could have shown dramatic gains from IT deployment, but has, may not have contributed at the organizational level.

Another reason – and is quite common in many organizations – is that there is no impact measurement from end-to-end. So, even while individual processes may have improved significantly, their disjointed nature may not have impacted even functional efficiency, let alone operational efficiency. Above these layers, intelligent automation is introducing a new layer that can dramatically increase an organization's business level efficiency. That is a new paradigm and will soon become a mainstream expectation from digital technology.

The CEOs are expected to promote the use of technology applications for this most basic business requirement.

Vision

Strengthen organizational efficiency by bringing sustainable digital capability

Strategy

Leadership must commit strongly to increasing organisational efficiency, and the appropriate technological interventions are also required. To accomplish the same, we recommend:

Be a purposeful differentiator and strive for continuous improvement for the better

- Revisiting organization's mission and goals considering changing business scenarios and technological advancement
- Revalidating all organizational processes that have an impact on the levers, including those that effect cost reduction, revenue generation, and improving productivity.
- Defining organization level Balance Score Card (BSC) - KPIs cascading down the level
- Defining the organization's digital strategy, including a roadmap for its effective execution and the digitalization committee that will oversee it.

CEO's Interventions

- Play a pivotal role in implementing change across organization, and designating specific SMEs for driving the same in key business functions
- Making sure that digital strategy is implemented methodically and supporting pertinent investments



DIGITAL QUOTIENT

Increasing Organizational Digital Quotient

AUTHORS

- **Akhil Raizada**
General Manager -IT, NTPC
- **Avdhut Parab**
CIO, Parle Agro
- **Mayuresh Purandare**
Head - IT Infrastructure &
Security, Marico
- **Neeti Wahi**
Group Chief Information &
Digital Officer,
Sterlite Power
- **Ramkumar Mohan**
CIO, Air Works India
(Engineering)
- **Sandesh Rane**
Chief Digital Officer,
Group Landmark
- **Vasudevan Vimalan**
CIO, E.I.D. Parry (India)
- **Vinod Krishnan**
CIO, Indus Towers

DIGITAL transformation is not so much about digitization as it is about creating, often reimagining, business value. Despite sincere efforts and budgets, those transformation plans often move painfully slow because many stakeholders are simply not ready to play their role.

It may happen due to many factors including but not limited to:

- inappropriate understanding of the transformation/reimagined concept of value
- resistance to change/fear about loss of control/power/importance
- inadequate idea about the gains

Technologies that could help

Since increasing digital quotient involves complete rethinking, different businesses could need different technologies. Some common technologies include:

- AI/ML
- Analytics
- Cloud
- IoT
- 5G
- Other physical technologies like drones etc

- fear of technology
- lack of interest in senior people to invest their time and energy to learn

It is essential that the digital quotient of the organization is upped in order to get the real transformation rolling. How? That depends on identifying what needs to change and then addressing them – from simple digital literacy training to townhalls, workshops, committees consisting of people from all levels, exemplars and celebrating success, creating champions leveraging younger generation workforce and so on.

Drivers

Pandemic has taught us that it's a VUCA (Volatile, Uncertain, Complex, Ambiguous) world:

- Margin constrains and cost savings are being looked at as priority
- Changing customer & employee expectation due to new normal
- New & agile business models are needed to address various customer needs
- With digital, new data sets can be gathered which can help in new product and service design and objective data-based decisions

Vision

Vision of increasing digital quotient of the organization could vary from surviving to thriving in a competitive landscape. We believe there should be some tangible goals and objectives like



1. Creation of Digital KPIs and targets (e.g. x% revenue from digital business)
 2. Data-driven business decisions
 3. Cost and time saving initiative
 4. Cultural change – mindset, skillset and people
 5. Organizational productivity – people, process, technology changes
- Create cross functional projects to achieve cost & time savings
 - Create robust governance model to track KPIs
 - Culture Change – Organizational Development initiatives, R&R, Top Driven communications
 - Build/use digital tools to enhance people and process efficiency

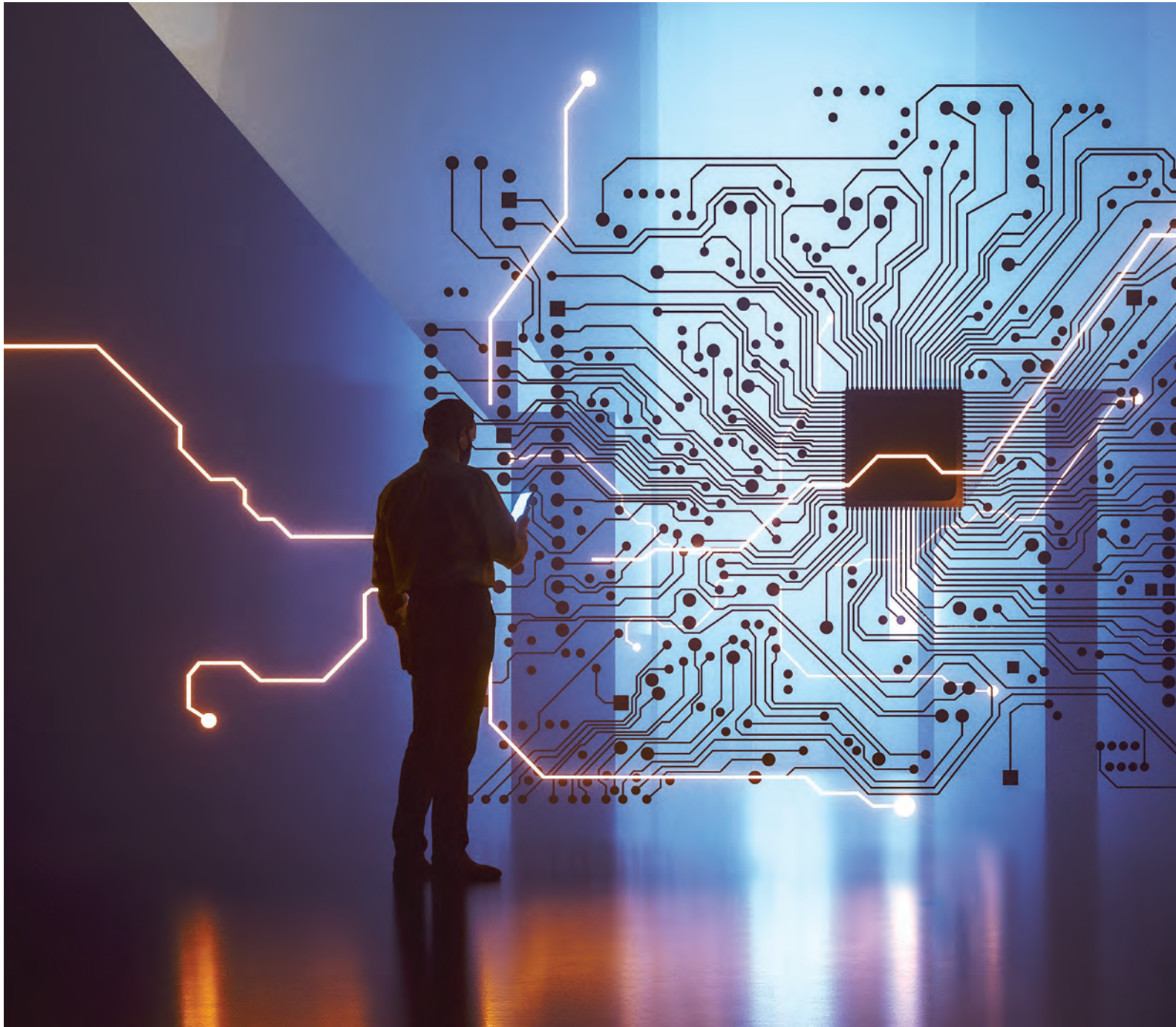
Strategy

There should be some definite strategic steps. We recommend the following:

- Create short term, medium term and long-term digital roadmap
- Create company level, departmental and individual KRAs/ KPIs in line with roadmap

CEO's Interventions

- Drive culture, remove roadblocks by providing guidance, provide timely & strategic intervention
- Present and sell digital vision to board, investors & stakeholders



SECURITY, COMPLIANCE & CYBER RISK

Managing Security, Compliance & Cyber Risk

AUTHORS

- **Ananth Subramanian**
Executive Vice President and Head IT,
Kotak Mutual Fund
- **Kashinath Shahane**
Director - IT, Global IT Infrastructure &
Service Delivery & Cloud Computing,
Visteon Corporation
- **Liton Nandy**
Executive Director (IS), Indian Oil Corporation
- **MS Raju**
CTO & Head - IT,
Shriram Life Insurance Company
- **Rajkumar Ayyella**
CIO, KEC International
- **Ravi Sharma**
Head IT, Wanbury
- **Sendil kumar Venkatesan**
CTO, Shriram Capital
- **Vivek Digumarti**
Head IT, Laurus Labs
- **Sumesh Kumar**
VP - Technology & Operations, DBS Bank
- **Suresh kumar**
Partner & CIO, Grant Thornton

THE average financial impact of a data breach incident is estimated by the Ponemon Institute to be USD 4.35 million in 2022--with compromised

Technologies that could help

- **Perimeter:** Next Gen firewall, Web Application Firewall, Gateway AV, Mail APT, Content filtering, Malware protection
- **Network:** IPS, IDS, Firewall, Network APT, LTM, DDoS, Jump Box/Bastion Host
- **DC/Server:** NG DC firewall, DLP, HIPS, DECOYS
- **End point:** XDR/EDR, Patch management, NAC, VPN, AD Authentication.
- **Application:** OWASP Top 10 Vulnerability, IDAM (PIM/PAM), MFA, VAPT
- **Event Management and Response:** SIEM, SOAR, UEBA, 24/7 SOC operations
- **Business Continuity:** DC/DR Replication and DR Readiness
- **Cloud:** SASE (Secure Access Service Edge), CASB (Cloud Access Security Broker), CSPM (Cloud Security Posture Management), CWPP (Cloud Workload Protection Platform)

credentials, phishing, and cloud misconfiguration identified as the top attack vectors.

As the physical and digital worlds grow ever more connected, collaborative and complex, cybersecurity has become an important business imperative because key stakeholders—shareholders, customers, and employees—have come to equate any security breach to a breach of trust; and regulators are increasingly imposing new responsibilities on corporate officers to prevent and mitigate the impact of data breaches.


A cohesive strategy that aligns security and business is required to ensure a cyber-resilient business that can respond quickly to threats, minimize damage and continue to operate under attack. The effort relies on business leaders to ask the right questions, challenge their organizations to identify and treat cyber risk effectively, be more attuned to how security investments are faring, and lead the culture change to embrace security across the organization.

Vision

To protect organization from any known and unknown cyber threats and to run the business resiliently even during adverse conditions.

Strategies

A good cybersecurity strategy can serve multiple objectives, such as minimizing risk, conforming with compliance, building trust among



The cyber security posture needs to align with the new normal, as the boundary of the premise has disappeared.

customers and stakeholders, and protect the intellectual assets.

Specific elements of a good cyber security strategy could include:

- A holistic GRC plan
- Continuous cyber awareness programs for people
- A 360-degree and multi-layer cybersecurity mechanisms using depth-in defense approach
- A Cyber Crisis Management Plan (CCMP)
- Zero trust architecture across information systems landscape
- Continuous security and vulnerability assessment, with simulation exercises
- Implement/strengthen segregation of duties

- Define and implement TPRM (third party risk management) for vendors
- Implement OT, IOT, Cloud Security
- Implement privacy compliance proactively
- Threat intelligence sharing

CEO's Interventions

- Provide Cyber Risk the level of importance in line with financial risk of the company
- Facilitate requisite budget and resources, cybersecurity investments cannot be measured using the same parameters as other IT investments.



INDUSTRY 4.0

Transforming through Industry 4.0

AUTHORS

- **Ajitsingh Nawale**
Head - IT, Mahindra CIE
Automotive
- **Chetan Trivedi**
CIO, Hindustan Zinc
- **Dinesh Talniya**
CIO, APL Apollo Tubes
- **Manish Grover**
Executive Director (Strategic IS
& IS), Indian Oil Corporation
- **M Surya Rao**
Head - IT, Jindal Power
- **Rajeev Taneja**
CIO & Operating Officer - IT,
Honda Motorcycle & Scooter
India
- **Sarveswara Rao Devana**
Head - IT & GM, Mobis India
- **Vinod Khode**
Group CIO, Varroc Engineering

EVER since the World Economic Forum (WEF) made Fourth Industrial Revolution, the theme for its annual conference at Davos in 2016, the concept has caught the imagination of the CEOs of manufacturing industries. Seen as the least matured in using digital technologies, this provided a way for them to leapfrog.

The initial definitional view of Industry 4.0 was technological – centering around sensory technologies like IoT. It created new possibilities and brought in new fears – of exposing the plants and factories to the ‘vulnerabilities’ of digital technologies – among the traditional production heads, the custodians of the manufacturing systems. The basic challenges around smooth integration between IT and operational

Technologies that could help

- **3D printing**
- **5G**
- **IoT/IIoT**
- **Edge computing**
- **AI/ML**
- **Cyber Physical Systems (CPS)**
- **Smart Factories**

technologies (OT) did not help the matter. This continues to remain a problem till date.

But thanks to many changes in external situations – not the least of which is the pandemic – going for Industry 4.0 in right earnest has become an imperative.

The industry is moving towards more humane Industry 5.0. Organizations should be prepared to tackle the new challenges and tap newer opportunities.

Vision

To create integrated technology environment (IT & OT Systems) for building a data-driven organization to maximize business value

Drivers

Today, transformation of manufacturing industries has become inevitable owing to several changes. These changes include the following:

- Emerging technologies have brought a disruption, challenge to stay relevant and competitive
- Lack of real-time visibility of business performance in terms of both health & utilization of assets
- Organization is generating large amount of data points, however no real “business insights”
- Line between IT and OT System is collapsing, making it complex and exposed to cyberthreats

Culture is the operating system of the organization.

To create a digital culture, you must reinvent

Strategies

Here is a recommended strategic roadmap.

1. Define technology roadmap in line with business goals:

- Discovery and Prioritization
- Data Strategy
- Security Architecture

2. Enable data-driven decision making:

- Build a Data Lake
- Leverage AI/ML
- Build a visualization layer

3. Cultural Transformation:

- Re-skilling & up-skilling of workforce
 - Change management
- ### 4. Create health pipeline of digital initiatives with clear measurement of outcomes

CEO's Interventions

It is simple:

- Build a top-down approach and build business ownership
- Allocate desired resources



BUSINESS PARTNERS

Leveraging Tech Partners as Business Partners

AUTHORS

- **Abhishek Danej**
Presales Consultant, Microfocus
- **Anita Kukreja**
Head - Marketing, IceWarp
- **Ashish Sharma**
Strategic Head, Special
Projects, Iron Mountain
- **Kaartick
Ramasubramnian**
GM – Solutions Engineering,
Tata Communications
- **Khashyap Krishnan**
Lead Solutions Consultant,
Freshworks
- **Piyush Gupta**
Head, Sales & Marketing,
AdaniConneX
- **Prateek Dharashiokar**
Enterprise Sales, GitHub
- **Vasuki KS**
Regional Director – Enterprise
Business, AMD

IT is no more a tool to automate tasks; not even for that matter, automate processes. Today, it impacts business at all the three layers – strategy, process, and product.

Business decisions are made simpler and more informative through technology. Technology is also helping business managers identify both problems and opportunities proactively. They are also able to know and understand their customers far better.

As a result, CEOs and other business leaders are looking at IT with an outside-in view. What are the use cases for this technology in our business, or what value can it create for our business? A long way from the days technology only entered when a problem was defined, a solution was worked out – and technology just helped in making that solution work.

It has necessitated a need to engage with technology – and technology providers – in various stages of business decision cycle – formulating strategies, selecting tactics, planning projects and of course implanting the specific solutions.

So, the defined RFP regime may not always work to get the best result. The technology providers can provide information such as industry adoption, best practices, existing challenges, opportunities and so on – much like a business partner, or an extended arm of an organization's business.

Vision

To get the best business value from technology by working with technology providers as business stakeholders.

Drivers

Various environmental changes are driving the change in mindset. Some of them are:

- better alignment of technology to business goals
- need to simplify a complex ecosystem
- skill shortage
- innovation & proactive disruption
- commercial implication for business
- Better Rol
- Ever-evolving tech landscape

Strategy

The following approach could help in achieving better business value through

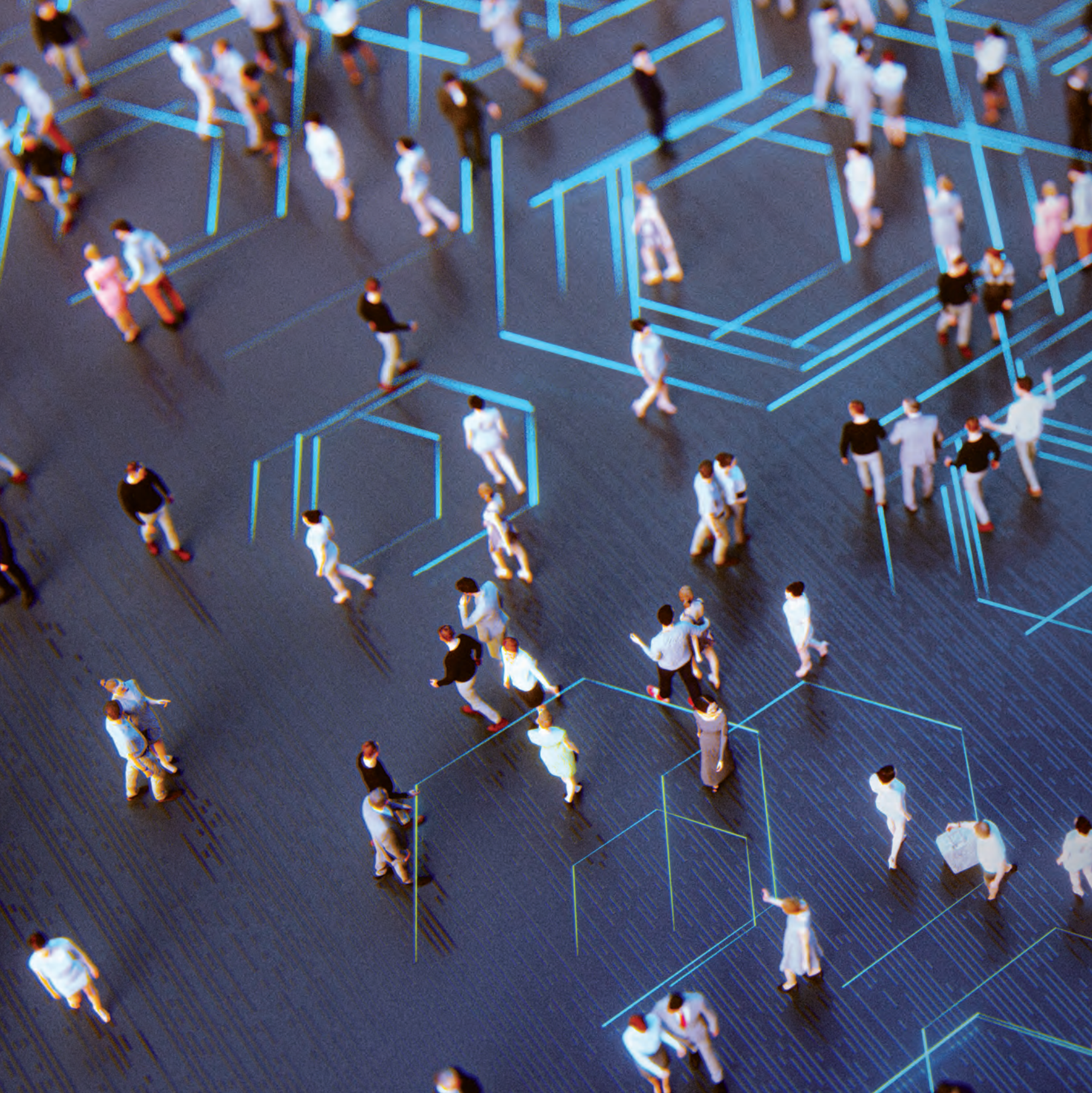
- Engage effectively – early involvement/ engagement, consult, evaluate, exploratory conversations
- Try innovative engagements like outcome-based models


Transformation of a tech partner into business stakeholder brings joint ownership resulting in achievement of desired business goals.

- Define role of business managers & CIOs - early engagements of business managers with tech partners for better alignment and better user experience
- Encourage CIOs to adopt inclusivity leading to transparency and effectiveness

CEO's Interventions

- Actively engage with tech partners sharing the risk and reward
- Supplement tech strategy with a culture change strategy





**THE
BRAINS
BEHIND
THE BOOK**



Abhishek Danej
Presales Consultant
Microfocus

PG. 55



Abhishek Gupta
CIO & CDO
DishTV

PG. 31



Ajay Rambal
Head - IT
LG Electronics India

PG. 23



Ajitsingh Nawale
Head - IT
Mahindra CIE Automotive

PG. 51



Akhil Raizada
GM - IT
NTPC

PG. 43



Amit Pradhan
VP - IT & CIO
Dixon Technologies

PG. 39



Anand Hadgaonkar
CIO - Asia
Whirlpool Corporation

PG. 31



Ananth Subramanian
EVP & Head - IT
Kotak Mutual Fund

PG. 47



Anantha Padmanabha
CTO & DGM
Karnataka Bank

PG. 19



Anita Kukreja
Head - Marketing
IceWarp

PG. 55



Apurva Dalal
CIO & Acting CISO
Adani Green Energy

PG. 15



Arvind Koul
Global Head - IT
Infrastructure & Security
UNO Minda Group

PG. 11



Ashish Desai
CIO - Textiles Business
Grasim Industries

PG. 27



Ashish Sharma
Strategic Head, Special
Projects
Iron Mountain

PG. 55



Ashok Jade
Group CIO
Spark Minda

PG. 31



Ashok Nayak
CIO
Ipca Laboratories

PG. 31



Atanu Pramanic
Joint President & CIO
Hindalco Industries

PG. 15



Avadhut Parab
CIO
Parle Agro

PG. 43



Bhakti Tare
Head - HO IT Application,
Corporate IT
Larsen & Toubro

PG. 27



Bhalchandra Ghanekar
Director - Software
Development
Angel Broking

PG. 23



Byju Joseph
CTO
Future Generali India Life
Insurance Co

PG. 19



Chandan Sinha
Group CIO
Jindal Saw

PG. 31



Chetan Trivedi
CIO
Hindustan Zinc

PG. 51



Debanjan Banerjee
CIO
Pernod Ricard India

PG. 15



Deepak Bhosale

GM - IT
Asian Paints

PG. 23



Dhaval Pandya

Corporate CIO
Piramal Enterprises

PG. 31



Dinesh Talniya

CIO
APL Apollo Tubes

PG. 51



**Durgaprasad
Swaminathan**

EVP & CIO
Cholamandalam
Investment & Finance
Company

PG. 35



Gaurav Bagga

Head - Product &
Engineering
Pristyn Care

PG. 11



Harnath Babu

Partner & CIO
KPMG India

PG. 19



Hemant Misra

VP & Head of Applied
Research
Swiggy

PG. 11



Jitendra Mishra

CIO
Akums Drugs &
Pharmaceuticals

PG. 39



**Kaartick
Ramasubramnian**
GM - Solutions Engineering
Tata Communications

PG. 55



Kapil Mehrotra
Group CTO
NCML

PG. 19



Kashinath Shahane
Director - IT, CTO, Global
IT Infrastructure & Cloud
Services
Visteon Technical and
Services Centre

PG. 47



Khashyap Krishnan
Lead Solutions Consultant
Freshworks

PG. 55



Kirti Patil
Joint President - IT & CTO
Kotak Life Insurance
Company

PG. 23



Kopal Sarin Raj
VP - IT & India CIO
Wabtec Corporation

PG. 23



LB Sharma
GM - IT
BPCL

PG. 11



Liton Nandy
Executive Director (IS)
Indian Oil Corp

PG. 47



M Surya Rao

Head - IT
Jindal Power

PG. 51



Mahesh Koria

VP & Head - Analytics &
Reporting (Liabilities &
Assets), BIU
Axis Bank

PG. 23



Manish Grover

Executive Director
(Strategic IS & IS)
Indian Oil Corp

PG. 51



Manoranjan Kumar

CIO
Shree Cement

PG. 19



Mayuresh Purandare

Head - IT Infrastructure &
Security
Marico

PG. 43



Meheriar Patel

Group CIO - Digital
Solutions
Jeena & Company

PG. 39



Mohan Malage

Head - IT Infra
Yes Bank

PG. 31



Mukesh Kumar

VP & Head - IT
Think and Learn (BYJUS)

PG. 19



**Nagarajan
Vaidyanathan**

Head - IT Infra (SAP BI, Non
SAP Systems & Analytics)
Britannia Industries

PG. 11



Naresh Kumar Pathak

VP - IT & CIO
G R Infraprojects

PG. 19



Neeraj Vetkar

GM - IT
Avenue Ecommerce

PG. 39



Neeti Wahi

Group Chief Information &
Digital Officer
Sterlite Power

PG. 43



Nikhil Khanapurkar

Senior Vice President
HDFC Bank

PG. 27



Pankaj Kankar

CTPO - AJIO Fashion &
Lifestyle
Reliance Retail

PG. 36



Paresh Goswami

Head - IT
Suzuki Motor Gujarat

PG. 39



Piyush Gupta

Head, Sales & Marketing
AdaniConneX

PG. 55



Prateek Dharashiokar
Enterprise Sales
GitHub

PG. 55



Puneesh Lamba
CTO
Shahi Exports

PG. 39



Rajeev Batra
CIO
Bennett, Coleman & Co

PG. 23



Rajeev Mittal
CIO
Endurance Technologies

PG. 39



Rajeev Taneja
CIO & Operating Officer - IT
Honda Motorcycle & Scooter
India

PG. 51



Rajiv Sharaf
Head - IT
Torrent Power

PG. 31



Rajkumar Ayyella
CIO
KEC International

PG. 47



Raju MS
CTO & Head - IT
Shriram Life Insurance
Company

PG. 47



Ramkumar Mohan

CIO
Air Works India
(Engineering)

PG. 43



Ravi Sharma

Head - IT
Wanbury

PG. 47



Rohit Chatter

Chief Software Architect
Walmart Global Technology
Services India

PG. 27



Sandesh Rane

Head - IT
Mahindra & Mahindra

PG. 43



Sanjay Narkar

Advisory Board Member
Finarya Tech

PG. 15



Sanjay Prasad

Group CIO
RP-SG CESC Power Group

PG. 39



**Sarveswara Rao
Devana**

Head - IT & GM
Mobis India

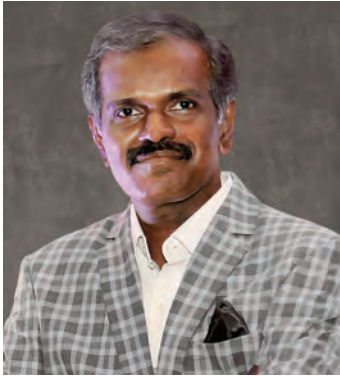
PG. 51



Sathyanarayana Singh

CIO
Nayara Energy

PG. 15



**Sendil Kumar
Venkatesan**
CTO
Shriram Finance Ltd

PG. 47



Shailesh Tripathi
Executive Director - IT
Housing and Urban
Development Corp

PG. 11



Shobhana Lele
CIO
Bombay Dyeing &
Manufacturing Co

PG. 27



Shyamanuja Das
Editorial Director -
Enterprise Technology
9.9 Group

PG. 7



Sivasubramanian M
Global CIO
VA Tech Wabag

PG. 39



Sridhar D
DGM - IT & CTO
Karur Vysya Bank

PG. 15



Subodh Dubey
Global CIO
Suzlon Group

PG. 35



Sujit Sinha
Head - IT Infrastructure
FIAT India Automobiles

PG. 31



Sumesh Kumar
VP - Technology &
Operations
DBS Bank

PG. 47



Sunil Mehta
President & Systems
Director - South Asia &
South-East Asia
WPP

PG. 35



Suresh Kumar
Partner & CIO
Grant Thornton

PG. 47



Vasudevan Vimalan
CIO
E.I.D. Parry (India)

PG. 43



Vasuki KS
Regional Director -
Enterprise Business
AMD

PG. 55



**Venugopalam
Medicherla**
Group VP - Digital
Technology
MSPL Limited

PG. 11



Vikas Gupta
Founder & Director
9.9 Group

PG. 5



Vinod Bhat
CIO
Tata SIA Airlines (Vistara)

PG. 35



Vinod Khode
Group CIO
Varroc Engineering

PG. 51



**Vinod Sivarama
Krishnan**
CIO
Indus Towers

PG. 43



Vivek Digumarti
Head - IT
Laurus Labs

PG. 47

NOTES

The New. Blueprint

The New Blueprint is a strategic technology advisory document prepared to help Indian CEOs effectively formulate and execute their digitization strategy, which has become central to both survival and growth.

The book is divided into 12 chapters, each dealing with a business priority area, where technology can bring in significant transformational change.

The book goes beyond vision statements and provides practical advices on how to lead the change.

Written by leading Indian CIOs who, as custodians and drivers of technology-driven change, not just understand technology but also are familiar with the ground realities in Indian organizations, the book can serve as a practical guide for the CEOs.

CIO&LEADER
TRACK TECHNOLOGY • BUILD BUSINESS • SHAPE SECT

